

REMARKS

The present remarks and amendments are responsive to the Office Action mailed on June 11, 2009. Claims **44 - 74** are pending in this application. Claims **1-43** and **62, 69, 70**, were canceled by previous amendment.

By the following remarks, remaining pending claims **44-61, 63-68, 71**, and **73-74** are believed to be in condition for allowance and are again presented for reconsideration.

Discussion of the Office Action

In the Office Action of June 11, 2009, the Examiner specifically rejected claims **44-61, 63-68, 71**, and **73-74** under 35 U.S.C. §103(a) as being unpatentable over Gygi et al. (Nature Biotechnology, 1999, IDS) (Gygi).

Rejection of claims **44-74** under 35 U.S.C. §103(a)

As set forth above, claims **44-61, 63-68, 71** and **73-74** stand rejected under 35 U.S.C. §103(a) as being unpatentable over Gygi et al. (Nature Biotechnology, 1999, IDS) (Gygi). The Applicants must traverse the rejection in light of the amendments and comments contained herein.

The Applicant has amended the last element of each of base claims **44, 63, 71** and **73-74** to include the limitations of having the reference sample and the first peptide mixture (biological sample) are unlabeled. Thus, Applicant respectfully submits that the applied and sole reference, i.e., Gygi et al does not teach or suggest such limitations expressly or impliedly. The reference “Quantitation analysis of complex protein mixtures using isotope-coded affinity tags,” as authored by Gygi et al describes a method of assessing relative peptide concentrations using mass spectrometry and isotope-coded affinity tags (ICATS). The isotope-labeled methodology creates peptides that although differing in mass, have chemical and physical properties, such as chromatographic retention time and ionization efficiency that are similar to their counterparts. Specifically, Gygi describes an approach

wherein a peptide is labeled differently in differently samples, which are then combined and submitted for mass spectral analysis (see for example, Fig. 2).

By contradistinction, the present application teaches and as similarly disclosed in each of the amended independent claims that the peptide mixture (biological sample) and the reference sample can be unlabeled. For example, as disclosed on page 5 of the specification, lines 19-23, the Applicant states, "No labor-intensive and time-consuming labeling of samples is needed prior to analysis. Likewise, no expensive reagents are required to create an internal standard, as in isotope-coded affinity tag (ICAT) or similar methods. The techniques are not limited to proteins that contain particular amino acids (such as cysteine)."

In addition, and as asserted in the response to the Office Action mailed November 11, 2008, Appellant again respectfully submits that one skilled in the art would not have combined his teaching with Gygi et al to include an external standard as presented in each of the independent claims, as discussed in the response mailed 4/21/09. The reasoning behind such an assertion is that along with arguments presented in the response of 4/21/09, Gygi et al specifically excludes the possibility of an external sample because the samples are combined prior to analysis. In particular, Gygi et al states on page 995, column 2, first full paragraph, that "pairs of peptides tagged with the light and heavy ICAT reagents, respectively, are chemically identical and therefore serve as mutual internal standards for accurate identification." Therefore, Applicant submits that one skilled in the art at the time of the present invention would not have modified the teachings of Gygi et al., i.e., (Nature Biotechnology VOL. 17 October 1999) because the technique required the use of an internal standard.

At the very least, Applicants submits that the reference (Gygi et al) does not teach nor suggest the use of unlabeled counterparts, as disclosed in the present application and as shown in the last element of each of independent claims 44, 63, 71 and 73-74.

Regarding claims **45-61**, and claims **64-68**, such claims either directly or indirectly depend from their respective base claims and thus inherit the limitations of such base claims.

Under MPEP §2143.01,

"If an independent claim is nonobvious under 35 U.S.C. §103, then any claim depending therefrom is nonobvious." In re Fine, 837 F.2d 1071, 5 USPQ2d 1596 (Fed. Cir. 1988).

Accordingly, Applicants also respectfully submit that the rejection of claims **45-61**, and claims **64-68** under 35 U.S.C. §103(a) is also improper and is requested to be removed, as mandated under MPEP §2143.01.

CONCLUSION

The undersigned respectfully submits that, in view of Applicant's amendments and comments, the rejections of the claims raised in the Office Action dated June 11, 2009 have been fully addressed and overcome, and the present application is believed to be in condition for allowance.

It is respectfully requested that this application be reconsidered, that remaining pending claims **44-61, 63-68, and 71, 73-74** be allowed and that this case be passed to issue. In the event that the Examiner finds any remaining impediment to the prompt allowance of these claims that can be clarified with a telephone conference, he is respectfully requested to initiate the same with the undersigned at (408) 965-6200.

The Commissioner is hereby authorized to charge any appropriate fees under 37 C.F.R. §§1.16, 1.17, and 1.21 that may be required by this communication to Deposit Account No. 50-3267.

Applicant: Bondarenko et al.
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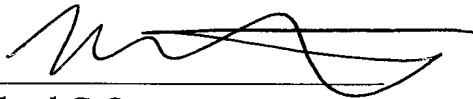
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